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exposed to aisle 106. Display/keyboard rail system 140 could use any type of mechanism to permit the display 120 and the keyboard housing 130 to translate in and out of a slot in an industrial PC rack. A simple drawer or slider mechanism or more elaborate systems could be employed depending upon the particular needs for any particular implementation. Keyboard housing 130 is shown as a cover over keyboard 230; however, this is not a necessary feature of keyboard housing 130. Keyboard housing 130 could be a simple drawer or slider mechanism similar to display/keyboard rail system 140 or it could be a shielding dust cover to protect the keyboard 230 from dust and any falling debris. The interface between display trailing edge 124 and keyboard housing leading edge 132 of keyboard housing 130 can be any structure suitable for carrying out variable positioning of display 120. A hinge, such as a piano hinge, side hinges or any type of device to facilitate variable pivoting of display 120 with respect to keyboard housing 130 could be used. Keyboard 230 can be any alphanumeric type of keyboard, numeric keypad or data entry device such as a touch pad, track ball, or other cursor controller.

A more detailed understanding of the present invention can be achieved by now referring to FIG. 3, which shows the 1 U-sized display/keyboard unit 116 of FIG. 2 in a partially deployed arrangement. Display 120 has moved outwardly past display/keyboard rail system front end 142, so that it would extend into aisle 106 if 1 U-sized display/keyboard unit 16 were disposed in first rack of industrial personal computers 102. Display 120 is shown deployed in a position for use. Display 120 has been pivoted from a horizontal position as it is when stowed in FIG. 2, past a vertical position where display leading edge 122 is directly above display trailing edge 124. This tilting of display 120 backwards or upward beyond a vertical arrangement facilitates viewing by a technician whose eyes are above a midpoint between display leading edge 122 and display trailing edge 124 when display 120 is in a vertical arrangement. When the technician's eyes are at the exact same level as such a midpoint, then a vertical arrangement of display 120 may be preferred. When the technician's eyes are below this level, then the display 120 can be pivoted a shorter angular distance so that it is directed downward. When the display 120 is either vertical or directed downward, the display 120 can be retracted back into display/keyboard rail system 140 to limit the amount of encroachment into the aisle 106.

An even more detailed understanding of the present invention may be achieved by now referring to FIG. 4, which shows the 1 U-sized display/keyboard unit 116 of the present invention in a fully deployed arrangement. Keyboard 230 is shown extending outward so that keyboard trailing edge 234 approaches keyboard housing leading edge 132. When keyboard 230 is not needed, it can be stowed by pushing the keyboard leading edge 232 back toward the keyboard housing leading edge 132.

Of course, variations of the pivoting of display 120 could be done as well. For example, display 120 could be made to pivot downward, and the viewing surface of display 120 would be on the opposite side from that shown in FIGS. 3 and 4.

In operation, the apparatus and method of the present invention as described in FIGS. 1-4, could function as follows:

The 1 U-sized display/keyboard unit 116 is disposed in a 1 U sized slot in first rack of industrial personal computers 102 similar to that which houses 1 U-sized industrial computing component 114. Display/keyboard rail system rear

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end 144 is disposed internal to first rack of industrial personal computers 102. Display/keyboard rail system front end 142 is adjacent to the aisle 106. When a technician desires to use the display 120, the display 120 can be pulled into the aisle 106. Display 120 can be pivoted about display trailing edge 124, so that display leading edge 122 moves upward. If the technician is viewing from below, the amount of pivoting is limited and the display leading edge 122 never is disposed vertical of display trailing edge 124. If the technician is viewing from above, then display leading edge 122 can be moved past a vertical alignment with display trailing edge 124, so that display 120 is directed upward. In such cases, display 120 will need to be pulled further into the aisle 106 to create space between the backwardly tilted display 120 and the face plates of large industrial computing component 112 or other components disposed above 1 U-sized display/keyboard unit 116. If a keyboard or portions of a keyboard are needed, it can be pulled further into aisle 106.

Throughout this description, reference is made to an industrial PC because it is believed that the beneficial aspects of the present invention would be most readily apparent when used in connection with industrial; however, it should be understood that the present invention is not intended to be limited to industrial PCs and should be hereby construed to include other non-industrial PCs as well.

It is thought that the method and apparatus of the present invention will be understood from the foregoing description and that it will be apparent that various changes may be made in the form, construct steps, and arrangement of the parts and steps thereof, without departing from the spirit and scope of the invention or sacrificing all of their material advantages. The form herein described is merely a preferred exemplary embodiment thereof.

What is claimed is:

1. An industrial computer system;

a first rack of industrial personal computers;

a second rack of industrial personal computers;

an aisle disposed between said first rack of industrial personal computers and said second rack of industrial personal computers;

a 1 U-sized display/keyboard unit including a display for viewing information and a keyboard for data entry; the 1 U-sized display/keyboard unit being disposed in said first rack of industrial personal computers;

said 1 U-sized display/keyboard unit adapted and configured so that said display and said keyboard, when stowed, are arranged in a linear fashion with said display being disposed in a front portion of said first rack of industrial personal computers and adjacent to said aisle and said keyboard being rearward in said first rack of industrial personal computers;

said display and said keyboard being adapted and configured for unified translational motion in and out of said first rack of industrial personal computers,

said display being adapted and configured for pivotal motion with respect to said keyboard; and,

said keyboard being adapted and configured for independent translational motion with respect to said display.

2. A system of claim 1 wherein a first drawer slide mechanism is used to facilitate said independent translational motion.

3. A system of claim 2 wherein a second drawer slide mechanism is used to facilitate said unified translational motion.